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Eastern Germany

FDD Abstract

LABORATORY FOR SYNTHETIC FIBERS OF THE AGFA FILM FACTORY IN WOLFEN; Germany 9 pp;

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Summary report dated 1 Oct 51 covering the quarter ending Sep 1951. Covers 4 projects.

Project 1 M: Accomplishment of continuous polymerization and spinning process for Perlon (vacuum process). States that experts regard continuous evacuation of a lactam-containing perlon mass as impossible for practical purposes. Project was nevertheless undertaken to investigate all possibilities. In addition to air discoloration, difficulties were encountered when the spongy mass under vacuum could not be brought into the pumps, consequently hindering the course of the spinning phase. Gives brief description of further equipment modifications under development, and other possibilities for making the process operable. Also lab experiments are being conducted to determine the effect of various stabilizers on the evacuation process and its end-product.

Project 9 W: Accomplishment of perlon textile treatment. Machine has been developed to stretch, cook, dry, and prepare and wind perlon thread. Machine is to be built by Weinrich and Keller, Chemnitz-Einsiedel, to be ready in a few weeks provided parts and materials can be supplied. Intention is to produce perlon bristles and 'leska' fibers (wire) from bobbin to finished product in a continuous single-stage process, to enable experiments with coarse and fine perlon silks. (All)

Project 10 W: Development of a continuous polymerization process under pressure for perlon. Describes difficulties in 'DK-apparatus' experiments due to slow disintegration of clay-fragment boiling stone used in dehydration process, and consequent clogging of pumps, valves and cocks. Process with pressure stage (DK-apparatus) and without pressure stage (VK apparatus) was tried. Bosch pumps needed for pressure stage are not manufactured in the GDR so machine shop at plant developed modified version which was satisfactory. Gives brief description of patented process for fiber production.

Project 11 W: Testing of new raw materials as to suitability for processing to fully synthetic fibers. Buna Works, Schkepau, to supply polyamide raw materials. Tests on aminocapronitrile for perlon production were useless because material was not of sufficient purity for the purpose. AH-salt was tested for processing properties. Attempted to obtain terylene polyester from dimethyl ester of terephthalic acid, and ethylene glycol. Experiments were restricted to very small scale due to limited available quantity of terephthalic acid, which was esterified normally with methanol and hydrochloric acid.

Includes two diagrams, one of which is detail relative to Project 10 W.

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